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Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original): A wireless communication receiver for processing a superposed RF (radio frequency) signal containing two or more RF signals occupying overlapping RF bandwidth, the wireless communication receiver comprising:

a wideband receiver for receiving said superposed RF signal;

an analog to digital converter for converting said received superposed RF signal to a superposed digital signal using a common digitizing rate;

a channelizer for each of said RF signals that receives said superposed digital signal and limits said superposed digital signal to a bandwidth that corresponds with the bandwidth of each of said RF signals, providing a bandwidth clipped digital signal for each of said RF signals; and

a signal handling device for each of said RF signals that receives one said bandwidth clipped digital signal, said signal handling device comprising:

a multi-user detection decoder that shares data with multi-user detection decoders in other ones of said signal handling device to decode said bandwidth clipped digital signal to remove conventional and multi-access interference and provide a decoded digital signal; and

a rate adjuster that adjusts a sampling rate of said decoded digital signal to provide an output signal having a predetermined sampling rate.

Claim 2 (original): The wireless communication receiver of claim 1, wherein each said channelizer includes a rate adjuster that adjusts a sampling rate of said superposed digital signal

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to an adjusted common digitizing rate, wherein said adjusted common digitizing rate is a reduced multiple of each said predetermined sampling rate.

Claim 3 (original): The wireless communication receiver of claim 1, wherein at least one signal handling device includes a stream separator for forming separate streams from said bandwidth clipped digital signal, each stream based on a set of samples from said bandwidth clipped digital signal at said predetermined sampling rate and wherein said multi-user detection decoder decodes said bandwidth clipped digital signal responsive to said streams.

Claim 4 (original): The wireless communication receiver of claim 3, wherein all but said signal handling device for said RF signal having the largest bandwidth is provided with said stream separator.

Claim 5 (original): The wireless communication receiver of claim 1, wherein said common digitizing rate is determined such that said receiver can process a superposed RF signal containing RF signals associated with two or more air interface standards.

Claim 6 (original): The wireless communication receiver of claim 1, wherein said two or more RF signals comprise voice and data signals.

Claim 7 (currently amended): A wireless communication receiver for processing a superposed RF (radio frequency) signal containing two or more RF signals occupying overlapping RF bandwidth, the wireless communication receiver comprising:

a wideband receiver for receiving said superposed RF signal;

an analog to digital converter for converting said received superposed RF signal to a superposed digital signal using a previously determined common digitizing rate;

a channelizer for at least a first RF signal having the smallest bandwidth of said RF signals that receives said superposed digital signal and limits said superposed digital signal to a bandwidth that corresponds with the bandwidth of each of said at least said first RF signal of said RF signals, providing at least one bandwidth clipped digital signal;

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a first signal handling device for said first RF signal that receives a first respective bandwidth clipped digital signal, comprising:

a first decoder that removes interference and decodes said first respective bandwidth clipped digital signal to provide a first decoded signal representing said first RF signal; and

a rate converter that converts the sample rate for said first decoded signal to a first standard DSP rate for the said first RF signal; and

a signal handling device for said each RF signal, other than said first RF signal, that receives one of said superposed digital signal and respective said at least one bandwidth clipped digital signal, comprising:

a multi-user detection decoder that receives said first decoded signal from said first decoder of said first signal handling device and shares data with multi-user detection decoders in any other signal handling devices to remove conventional and multi-access interference and decode said one of said superposed digital signal and respective said at least one bandwidth clipped digital signal to provide a decoded signal for said each RF signal; and

a rate adjuster that adjusts the sampling rate of said decoded signal for said each RF signal to a standard DSP rate for said each RF signal.

Claim 8 (original): The wireless communication receiver of claim 7, wherein each said channelizer includes a rate reducer that reduces a sampling rate of said superposed digital signal to a reduced common digitizing rate which is a reduced multiple of said first standard DSP rate and a standard DSP rate for said each RF signal.

Claim 9 (original): The wireless communication receiver of claim 8, wherein said first signal handling device includes a stream separator for forming separate streams from said first bandwidth clipped digital signal, each stream based on a set of samples from said first bandwidth clipped digital signal at said first standard DSP rate, and wherein said decoder decodes said first

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bandwidth clipped digital signal using said streams.

Claim 10 (original): The wireless communication receiver of claim 7, wherein said common digitizing rate is determined such that said receiver can process a superposed RF signal containing RF signals associated with two or more air interface standards.

Claim 11 (original): The wireless communication receiver of claim 7, wherein said two or more RF signals comprise voice and data signals.

Claims 12 - 20 (cancelled)